

PROCEEDINGS
OF THE
BIOLOGICAL SOCIETY OF WASHINGTON

NEW SPECIES AND RECORDS OF *STRIGIPHILUS*
(PHILOPTERIDAE: MALLOPHAGA)
FROM THAILAND¹

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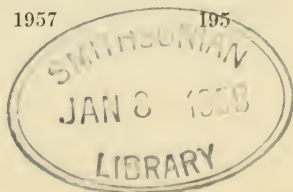
The Mallophaga described and identified in the following notes, except for those indicated as being in the British Museum (NH), were collected in Thailand by R. E. Elbel, H. G. Deignan, and Boonsong Lekagul during the period January 1952 to April 1955. Host identifications were furnished by Mr. Deignan, and are in accordance with the classification to be discussed in his forthcoming Check-list of Birds of Thailand. Skins of the birds from which the lice were collected are now in the U. S. National Museum. Collections were made possible by assistance from the U. S. National Museum and the United States Operations Mission to Thailand. The holotype and allotype of the new species described herein have been deposited in the U. S. National Museum.

Strigiphilus bramae (Qadri)

Eustrigiphilus bramae Qadri, 1935. Z. Parasitenk., 8:236, fig. 8. Type host: *Athene brama* probably *indica* (Franklin).

For comparison with the other forms discussed, illustrations of the male genitalia and outline of the dorsal view of the head of the male have been shown in figures 1 and 6. Specimens collected, in Thailand, from *Athene brama mayri* Deignan were: 21 males and 14 females at

¹This investigation was supported by research grant E-1722 from the National Institute of Allergy and Infectious Diseases of the National Institutes of Health, Public Health Service.



Ban Hua Thanon, Khlong Khlung, Kamphaeng Phet; 16 males and 8 females at Muaklek, Kaeng Khoi, Sara Buri; 9 males and 9 females on Khao Nip Mountain, Lop Buri; 4 males and 4 females at Luk Kae, Tamaka, Kanchanaburi; 2 males and 3 females at Ban Na Nong Thum, Chumphae, Khon Kaen; 2 males and 2 females on Khao Khat Mountain, Paknampho, Nakhon Sawan; 1 male and 1 female on Khao Oerawan Mountain, Lop Buri; 9 males and 6 females at Ban Lat, Ban Kaeng, Phukhieo, Chaiyaphum, and 1 female at Bo Phloi, Latya, Kanchanaburi.

Strigiphilus ketupae n. sp.

Male. Outline of head and dorsal anterior plate of forehead as shown in figure 2. Antennae slender and filiform. Three long setae dorsally in each posterolateral angle of pterothorax. Four long setae medianly on the dorsal posterior margin of pterothorax. Seven long setae slightly posterior to the small thoracic sternal plate. Abdominal tergal plates of segments II-IX divided medianly by a wide clear area. Dorsal chaetotaxy of abdominal segments is: II, 0-10-0; III, 2-10-2; IV, 3-10-3; V, 3-10-3; VI, 3-10-3; VII, 2-8-2; and VIII, 1-0-1. Chaetotaxy of abdominal pleurites is: III, 1 short setae; IV, 1 long setae; V, 3 long setae. VI, 5 long setae; VII and VIII, 4 long setae; and IX, 2 long setae. Abdominal sternal plates undeveloped. One median row of long setae on segments II-VII. Number of setae in each row is: II-8, III-16, IV-18, V-18, VI-18, and VII-2. Dorsally, eight long setae located medianly on segment IX, and 6 long setae medianly on posterior margin of terminal abdominal segment. Ventrally, 6 short setae medianly on segment IX, and 5 long setae slightly posterior to the posterolateral angles of the genital opening. Male genitalia as shown in figure 7.

Female. Similar to the male, except in size and terminal abdominal segments. Undivided tergal plate on abdominal segment IX, possesses 1 long and 2 short setae in each posterolateral angle. Sternal plate on abdominal segment IX, small and divided medianly, with 9 long setae on posterolateral angles.

	Measurements			
	Holotype male		Allotype female	
	Length	Width	Length	Width
Head	0.75mm	0.66mm	0.83mm	0.71mm
Prothorax	0.21	0.44	0.21	0.44
Pterothorax	0.16	0.60	0.20	0.68
Abdomen	1.04	0.82	1.10	0.87
Total	2.16		2.34	

The male genitalia differ only slightly from those found in several species of the genus. The long slender dorsal anterior plate of the forehead is distinctive, and is not found on any other known species.

Type host: *Ketupa zeylonensis leschenaulti* (Temminck).

Type material: Holotype male, allotype female and 51 paratypes collected at Ban Na Nong Thum, Non Han, Chumphae, Khon Kaen, Thailand on October 27, 1953 by Robert E. Elbel and Boonsong Lekagul; and 37 paratypes collected at Huai Yang, Prachuap Khiri Khan, Thailand.

Strigiphilus siamensis n. sp.

Male. Outline of head and dorsal anterior plate of forehead as shown in figure 3. Antennae slender and filiform. Four long setae dorsally in each posterolateral angle of pterothorax. Six long setae medianly on the dorsal posterior margin of pterothorax. Five long setae slightly posterior to the small thoracic sternal plate. Abdominal tergal plates of segments II-IX, divided medianly by a wide clear area. Dorsal chaetotaxy of abdominal segments is II, 1-8-1; III, 1-8-1; IV, 2-10-2; V, 2-10-2; VI, 2-8-2; VII, 2-8-2; and VIII, 1-6-1. Chaetotaxy of abdominal pleurites is: III, 1 short setae; IV, 1 short and 1 long setae; V-VIII, each with 4 long setae; and IX, 2 long setae. Abdominal sternal plates undeveloped, with one median row of long setae on segments II-VII. Number of setae in each row is II-6, III-12, IV-12, V-12, VI-8, and VII-2. Dorsally; 6 long setae medianly on segment IX, and 18 long setae on posterior margin of terminal abdominal segment. Ventrally; segment IX is bare, and possesses 6 long setae slightly posterior to the posterolateral angles of genital opening. Male genitalia as shown in figure 8.

Female. Similar to male except in size and chaetotaxy of terminal abdominal segments. Two rows of short setae on posterior margin of vulva. Five long setae on lateral margins of terminal abdominal segment.

	Measurements			
	Holotype male		Allotype female	
	Length	Width	Length	Width
Head	0.57mm	0.47mm	0.64mm	0.58mm
Prothorax	0.14	0.28	0.14	0.31
Pterothorax	0.14	0.47	0.17	0.52
Abdomen	0.87	0.61	1.21	0.80
Total	1.72		2.16	

This species is closest to *S. bramae* (Q.). In addition to differences in size, the male genitalia are smaller, and the dorsal anterior plate of forehead is considerably longer than in *S. bramae* (Q.).

Type host: *Glaucidium brodiei brodiei* (Burton).

Type material: Holotype male, allotype female and 6 paratypes collected at Ban Muang Khai, Tha Li, Loei, Thailand on January 29, 1955 by Robert E. Elbel.

Strigiphilus macrogenitalis n. sp.

Male. Outline of head and dorsal anterior plate of forehead as shown in figure 4. Antennae filiform, but first segments slightly enlarged. Three long setae dorsally in each posterolateral angle of pterothorax. Four long setae medianly on posterior margin of pterothorax. Five long setae slightly posterior to small thoracic sternal plate. Abdominal tergal plates of segments II-V, divided medianly by wide clear area. Dorsally, chaetotaxy of abdominal segments is: II, 1-6-1; III, 2-6-2; IV, 4-4-4; V, 6-2-6; VI, 6-2-6; VII, 6-2-6; and VIII, 6-2-6. Chaetotaxy of abdominal pleurites is III-IV, each with 1 small setae; V, 2 long setae; VI-VIII, each with 4 long setae; and

XI, 2 long and 1 short setae. Abdominal sternal plates undeveloped. One median row of long setae on segments III-VI. Number of setae in each row is: III-6, IV-8, V-8, and VI-10. Ventrally, terminal abdominal segment with 20 long and numerous short setae irregularly spaced. Dorsally, 20 long setae on posterior margin of terminal abdominal segment, and an irregular row of 26 long setae just anterior thereto. Male genitalia as shown in figure 9.

Female. Similar to male, except for size and terminal abdominal segments. Two irregular rows of short setae on posterior margin of vulva. Eight long setae on lateral margins of terminal abdominal segment.

	Measurements			
	Holotype male		Allotype female	
	Length	Width	Length	Width
Head	0.58mm	0.55mm	0.71mm	0.62mm
Prothorax	0.15	0.36	0.17	0.38
Pterothorax	0.16	0.48	0.20	0.57
Abdomen	0.87	0.70	1.22	0.90
Total	1.76		2.30	

This species is closest to *S. heterogenitalis* n. sp. The genitalia of the two forms are similar, but differ greatly from those of the other known species in the genus. In both forms, the dorsal anterior plate is extremely long and pointed posteriorly, extending rearward beyond the mandibular region. The two forms can best be separated by comparing figures 4 and 5; and 9 and 10.

Type host: *Glaucidium cuculoides brügeli* (Parrot).

Type material: Holotype male, allotype female and 4 paratypes collected at Ban Muang Khai, Tha Li, Loei, Thailand on January 12, 1955 by Robert E. Elbel. Paratypes from the type host are: 3 males and 7 females collected at Ban Lat, Ban Kaeng, Phukhieo, Chaiyaphum; 4 males and 4 females collected at Ban Na Nong Thum, Non Han, Chumphae, Khon Kaen; 6 males and 10 females collected at Pang Nam Un, Bun Yun, Nan; 25 males and 32 females collected at Pang La, Lampang; 1 male and 1 female collected at Huai Yang, Prachuap Khiri Khan; 6 males and 10 females collected on Phu Phan Mountain, Sakon Nakhon; 1 male and 1 female collected at Ban Thung Chuak, Salokbat, Khanu, Kamphaeng Phet; 4 males and 7 females collected at Chiang Saen Kao, Chiang Rai; 4 males and 4 females collected at Hin Laem, Tha Khanum, Kanchanaburi; 1 female collected at Khlong Khlung, Kamphaeng Phet; 8 males and 9 females collected at Ban Sang Kho, Khok Phu, Sakon Nakhon; and 3 males and 4 females collected at Ban Khlua Klang, Prachuap Khiri Khan; all localities being in Thailand. The British Museum (NH) has 8 males and 7 females collected off *Glaucidium cuculoides rufescens* Baker at Oating, Assam are also paratypes.

***Strigiphilus heterogenitalis* n. sp.**

Male. Outline of head and dorsal anterior plate of forehead as shown in figure 5. Antennae slender and filiform. Thorax except for

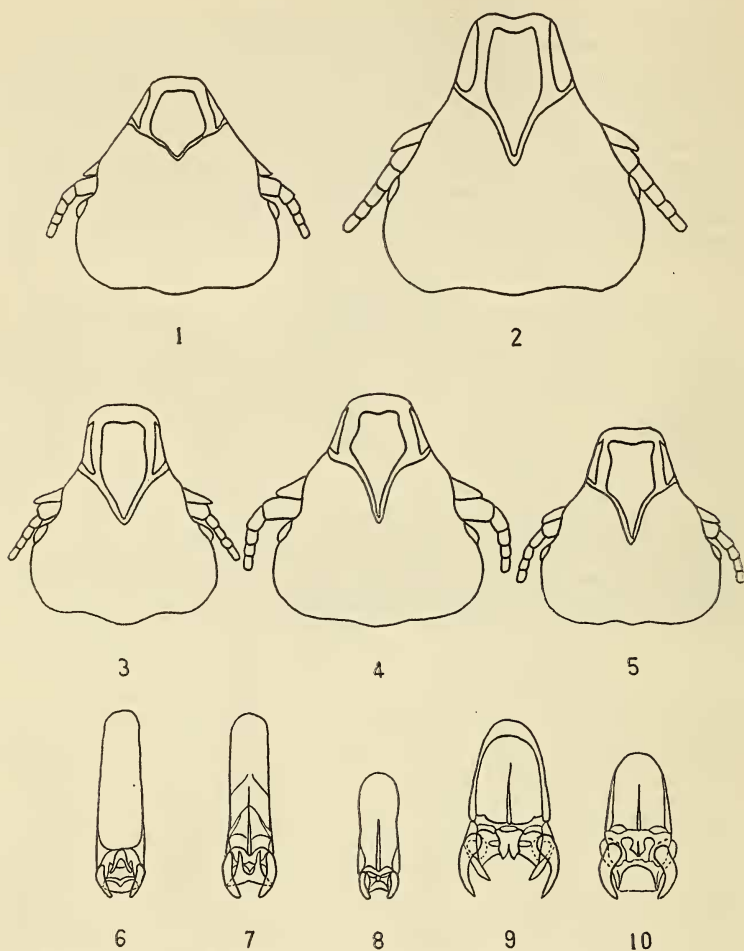
size as in *S. macrogenitalis*. Abdomen, except for size and chaetotaxy of terminal segments, as in *S. macrogenitalis*. Dorsally, terminal abdominal segment with 4 long and 6 short setae on genital flap, and 10 long setae on posterior margin. Ventrally, terminal abdominal segment with 20 long setae, irregularly spaced. Male genitalia as shown in figure 10.

Female. Similar to male, except in size and terminal abdominal segments. Posterior portion of vulva with many irregularly spaced short setae. Eight long setae on lateral margins of terminal abdominal segment.

	Measurements			
	Holotype male		Allotype female	
	Length	Width	Length	Width
Head	0.51mm	0.47mm	0.63mm	0.58mm
Prothorax	0.13	0.30	0.14	0.31
Pterothorax	0.14	0.42	0.16	0.42
Abdomen	0.69	0.57	0.88	0.66
Total	1.47		1.81	

Type host: *Otus bakkamoena lettia* (Hodgson).

Type material: Holotype male, allotype female and 11 paratypes collected at Hin Laem, Tha Khanum, Kanchanaburi on November 20, 1952 by Robert E. Elbel and H. G. Deignan.



Figures 1-5. *Strigiphilus* sp., Outline of head and dorsal anterior plate of forehead, male.

Fig. 1. *S. bramae* (Qadri).

Fig. 2. *S. ketupae* n. sp.

Fig. 3. *S. siamensis* n. sp.

Fig. 4. *S. macrogenitalis* n. sp.

Fig. 5. *S. heterogenitalis* n. sp.

Figures 6-10. *Strigiphilus* sp., male genitalia.

Fig. 6. *S. bramae* (Qadri).

Fig. 7. *S. ketupae* n. sp.

Fig. 8. *S. siamensis* n. sp.

Fig. 9. *S. macrogenitalis* n. sp.

Fig. 10. *S. heterogenitalis* n. sp.

All figures are drawn to the same scale.